



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,273	09/10/2003	Junichi Minato	242553US2	4029

22850 7590 03/19/2009
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

CAMPOS, YAIMA

ART UNIT	PAPER NUMBER
----------	--------------

2185

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

03/19/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/658,273	Applicant(s) MINATO, JUNICHI	
	Examiner YAIMA CAMPOS	Art Unit 2185	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-21 and 25-27 is/are pending in the application.
- 4a) Of the above claim(s) See Continuation Sheet is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/10/03, 12/10/03, 8/11/04, 8/19/05, 12/12/07</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Disposition of Claims: Claims withdrawn from consideration are 1-13, 22-24, 28-34 and embodiments of multiple dependent claims 25-27 depending upon non-elected withdrawn claims 1 and 22.

Art Unit: 2185

DETAILED ACTION

1. As per the instant Application having Application number 10/658,273, the examiner acknowledges the applicant's submission of Applicant's election without traverse of Group II, Claims 14-21 and 25-27 in the reply filed on January 2, 2009 is acknowledged. Non-elected claims 1-13, 22-24, 28-34 and embodiments of multiple dependent claims 25-27 depending on claims 1 and 22 are withdrawn from further consideration.

INFORMATION CONCERNING OATH/DECLARATION

Oath/Declaration

2. The applicant's oath/declaration has been reviewed by the examiner and is found to conform to the requirements prescribed in **37 C.F.R. 1.63**.

STATUS OF CLAIM FOR PRIORITY IN THE APPLICATION

3. As required by **M.P.E.P. 201.14(c)**, acknowledgement is made of applicant's claim for priority based on applications filed on 8/20/2003 (Japan 2003-296580), 9/20/2002 (Japan 2002-2759800) and 9/20/2002 (Japan 2002-275979).

INFORMATION CONCERNING DRAWINGS

Drawings

4. The applicant's drawings submitted are acceptable for examination purposes.

ACKNOWLEDGEMENT OF REFERENCES CITED BY APPLICANT

Art Unit: 2185

5. As required by **M.P.E.P. 609(C)**, the applicant's submissions of the Information Disclosure Statements dated 12/12/2007, 8/19/2005, 8/11/2004, 12/10/03 and 12/10/2003 are acknowledged by the examiner and the cited references have been considered in the examination of the claims now pending. As required by **M.P.E.P 609 C(2)**, a copy of the PTOL-1449 initialed and dated by the examiner is attached to the instant office action.

OBJECTIONS TO THE SPECIFICATION

Claim Objections

6. Claims 14, 20 and 25-27 are objected to because of the following informalities:

7. Claim 14 recites "...a shared-data control unit selecting any of the plurality of application programs... notifying an end of updating of the shared data to the selected application programs..." wherein the word "any" appears to suggest that only one application program is selected; however, the claim later refers to a plurality of selected application programs; thus, the Examiner interprets "... selecting any..." as selecting a plurality of application programs.

8. As per claim 20, the limitation "which the the end" in line 6 appears to be a typographical error and should be corrected to read **–which the end–**.

9. Claims 25-27 are objected to because they are multiple dependent claims depending from non-elected withdrawn claims, thus the embodiments of claims 25-27 depending on non-elected withdrawn claims 1 and 22 are held withdrawn. Refer to **(M.P.E.P. 608.01(n) [R-7] I-C)**.

Therefore, claims 25-27 should be amended to depend only on elected claim 14. Appropriate correction is required.

REJECTIONS BASED ON PRIOR ART

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. **Claims 1-20 and 25-27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chan et al. (US 6,965,893) in view of Sakata (US 5,528,361).

12. As per claim 14. Chan discloses An image forming apparatus, comprising:

a plurality of hardware resources provided to carry out image formation; **[plurality of computer nodes (Refer to fig. 7 wherein the embodiment of a node is shown) on a network sharing resources such as printers and memory for execution of a plurality of application programs/processes (col. 1, lines 13-33) wherein computers and shared resources may perform image formation]**

a plurality of application programs performing respective processing of the plurality of application programs related to the image formation; **[plurality of computer nodes on a network sharing resources such as printers and memory for execution of a plurality of application programs/processes (col. 1, lines 13-33) wherein computers and shared resource may perform image formation]**

a storage device storing rewritable shared data which is used by the plurality of application programs in common; **[plurality of computers nodes on a network sharing resources such as “data blocks of a storage medium or tables stored on a storage medium, may be**

Art Unit: 2185

concurrently accessed in some ways (e.g. read) by multiple processes, but accessed in other ways (e.g. written to) by only one process at a time” (col. 1, lines 1-33; fig. 2 and related text)]

and a shared-data control unit selecting any of the plurality of application programs as destinations of updating-start notification and notifying a start of updating of the shared data to the selected application programs when acquisition and updating of the shared data is inhibited in response to a write-lock request received from one of the plurality of application programs, [**“the processes on nodes 210-O to 210-N have access to various resources in a computer network... a lock manager 230 (*interpreted as shared-data control unit*) resides in a node 210, e.g., 210-O... a node is said to be seeking to obtain a lock when any process on the node is seeking to obtain a lock” (col. 4, lines 55-65) wherein “data blocks of a storage medium or tables stored on a storage medium, may be concurrently accessed in some ways (e.g. read) by multiple processes, but accessed in other ways (e.g. written to) by only one process at a time” (col. 1, lines 1-33; fig. 2 and related text) “Ownership of an exclusive mode lock 150 grants a process permission to perform any operation on a table and guarantees that no other process is performing any operation on the table” (col. 1, lines 53-59); thus, an exclusive lock in interpreted as the claimed write-lock. Chan further explains “lock manager 230 broadcast message to all nodes 210 for all nodes 210 to set their corresponding local exclusive lock flags 220” (col. 7, lines 4-11) wherein “if an exclusive lock is granted for a resource to any one node 210 of the plurality of nodes 210, then all local exclusive lock flags 220 for the resource in all nodes are set” (col. 5, lines 23-26) wherein an exclusive access lock is required for writing data since it guarantees no other**

Art Unit: 2185

process can perform any operation on the data, thus when acquiring an exclusive lock for writing purposes, the indication to other nodes of the exclusive lock acquisition comprises an updating-start notification]

and the shared-data control unit notifying an end of the updating of the shared data to the selected application programs when the acquisition and updating of the shared data is allowed in response to an unlock request received from said one of the plurality of application programs [“upon releasing the exclusive lock, the node that is holding the exclusive lock in step 512 notifies the lock manager 230 that the exclusive lock has been released. Lock manager 230 in step 516 in turn notifies requesting nodes 210S that has been waiting for the exclusive lock to be released that that exclusive lock has been released. The lock manager 230 may, at this point, also cause all the local exclusive lock flags to be cleared...” (col. 6, lines 37-52) “Lock manager 230 then notifies requesting node 210S that the granted lock has been released for requesting node 210S to obtain the requested exclusive lock” (col. 7, lines 28-30) wherein requesting nodes are place in waiting queues to wait for exclusive locks and are processed appropriately (col. 6, lines 53-62); thus when acquiring an exclusive lock for writing purposes, the release of the lock (or unlock) inherently indicates the end of updating of the shared data to the selected programs].

However, Chan does not expressly disclose that the present invention is embodied in an image forming apparatus comprising a plurality of hardware resources provided to carry out image formation, the a plurality of application programs performing respective processing of the plurality of application programs related to the image formation.

Art Unit: 2185

Sakata discloses an image forming apparatus comprising a plurality of hardware resources provided to carry out image formation a plurality of application programs performing respective processing of the plurality of application programs related to the image formation as **[image forming apparatus having plurality of hardware resources such as “reading means for reading a document, recording means for forming an image on a recording sheet, and an operating section for allowing an operator to set desired modes while displaying various kinds of information” (col. 3, lines 58-67; figs. 1 and 2 and related text) wherein “the application controller 166 executes the various applications while arbitrating the interchange of image data between the scanner and plotter and the applications via the image memory 195” (col. 12, line 16-20; col. 11, lines 21-37) and wherein “a plurality of functions to share a single image memory” (col. 39, lines 37-38)]**.

Chan and Sakata are analogous art because they are from the same field of endeavor of accessing a shared memory device by a plurality of processes or applications.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the system and method taught by Sakata wherein **[“a plurality of functions to share a single image memory” (Sakata; col. 39, lines 37-38)]** to control access to this shared image memory via locks, such as the system taught by Chan since Chan discloses **[“the invention is not limited to nodes and/or resources in a computer network. The techniques described herein are applicable to any system in which entity that seeks access to a resource that is access accessible to a plurality of entities” (col. 5, lines 1-5)]** such as the system taught by Sakata in which a plurality of applications access image memory. Further, modifying Sakata to control access to image memory via a lock as taught by Chan **[would**

Art Unit: 2185

improve the system as taught by Sakata since it would prevent stale data from being read from image memory by a reading process while another process is writing to image memory].

Therefore, it would have been obvious to combine Chan with Sakata for the benefit of creating an image forming apparatus to obtain the invention as specified in claim 14.

13. As per claim 15. The combination of Chan and Sakata discloses The image forming apparatus according to claim 14 wherein the shared data control unit selects as the destinations of updating-start notification any of the plurality of application programs that are provided to display the shared data on a displaying device [**Chan discloses all nodes are selected to receive exclusive lock status wherein an exclusive lock must be held for write access (col. 5, lines 9-31; col. 1, lines 28-32); thus indication that the exclusive lock is held by a node inherently comprises updating-start notification**] wherein Chan discloses a display device as [**“computer system 700 may be coupled via bus 702 to a display 712, such as a cathode ray tube (CRT), for displaying information to a computer user. An input device 714... is coupled to bus 702 for communicating information and command selections to processor 704... a mouse... for communicating direction information and command selections to processor 704 and for controller cursor movement on display 712” (col. 7, lines 52-64)**]; thus, since all nodes and processes are aware that a node is performing exclusive access, the processes in charge of display of data must be selected for updating-start notification; wherein Sakata further discloses [**“the operating section 113 includes keys for allowing the operator to enter desired information, and a display and indicators for informing the operator of the statuses of the copier” (col. 8, lines 30-33)**] wherein **“a plurality of functions to share a single image**

Art Unit: 2185

memory” (Sakata; col. 39, lines 37-38) in the copier]; thus, when combining Chan with Sakata, all applications, including display applications would access memory via access control locks and since all applications receive an exclusive lock indicator when an application has acquired an exclusive lock, display applications such as those taught by Sakata would inherently be selected to receive exclusive lock indicator indicating update start (or exclusive lock acquisition) by one of the applications.

14. As per claim 16. The image forming apparatus according to claim 15 wherein the displaying device is an operation panel which is provided to display operational messages to an operator and receive input operational commands from the operator [**Chan discloses “computer system 700 may be coupled via bus 702 to a display 712, such as a cathode ray tube (CRT), for displaying information to a computer user. An input device 714... is coupled to bus 702 for communicating information and command selections to processor 704... a mouse... for communicating direction information and command selections to processor 704 and for controller cursor movement on display 712” (col. 7, lines 52-64)] and [Sakata discloses “the operating section 113 includes keys for allowing the operator to enter desired information, and a display and indicators for informing the operator of the statuses of the copier” (col. 8, lines 30-33)].**

15. As per claim 17. The combination of Chan and Sakata discloses The image forming apparatus according to claim 14 wherein the shared-data control unit selects as the destinations of updating-start notification any of the plurality of application programs that are provided not to read out the shared data from the storing device upon starting of the image forming apparatus [**Chan discloses a “before a process can perform an operation on a resource, the process is**

Art Unit: 2185

required to obtain a lock that grants the process the right to perform the desired operation on the resource” (col. 2, lines 12-15), either a shared lock for read access or an exclusive lock for write access wherein in the preferred embodiment, all nodes are notified of the acquisition of an exclusive lock (col. 5, lines 9-31); thus even though Chan does not expressly disclose the applications do no read data upon the starting of the image system, one of ordinary skill in the art would recognize that when combining Chan with the image formation apparatus of Sakata so that access of applications to control memory is done via exclusive (or write) locks and shared (or read) locks, when starting the image formation apparatus of Sakata, none of the applications would read data unless they first acquire a lock as required by Chan (see above); thus, none of application programs selected to receive updating start notification (or indication that another program holds exclusive lock, since an exclusive lock is held for write access) are provided to read shared data upon system startup since they first must obtain a lock in order to read data].

16. As per claim 18. The combination of Chan and Sakata discloses The image forming apparatus according to claim 14 wherein, when acquisition and updating of the shared data is inhibited and a read-lock request is received from one of the plurality of application programs to which a start of the updating of the shared data is not yet notified, the shared data-control unit notifies the start of the updating of the shared data to said one of the plurality of application programs and rejects acquisition of the shared data in response to the received read-lock request [Chan discloses an exclusive lock inhibits acquisition and updating of data (col. 1, lines 56-59; col. 5, lines 61-67) wherein in the background section, Chan discloses an embodiment in which “the requesting node is required to send a message to the remote master node. The

Art Unit: 2185

lock manager then sends a response message to the requesting node to notify that node about whether a lock may be granted... When none of the nodes in the node group is holding an exclusive lock, and the requesting node is seeking a shared lock, the lock manager can grant the lock to the requesting because there are no conflicts” (col. 2, lines 32-49) “Ownership of an exclusive mode lock 150 grants a process permission to perform any operation on a table, and guarantees that no other process is performing any operation on the table” (col. 1, lines 56-59); thus any shared lock requests such as read requests would be rejected and a response message would be sent to the requesting node indicating a node is holding an exclusive lock and the read lock or shared lock may not be granted access wherein when an exclusive lock is obtained for write access, wherein the response indicating the lock is exclusively owned comprises write start notification]. Further note that a plurality of read accesses may be obtained when any of the processes holds a shared lock; however, when any of the processes holds an exclusive lock which is necessary for write access, no other process may have access to the data; thus when a process is writing and an indication is sent to a read (or shared) lock request denying the lock, this indication inherently comprises update start notification.

17. As per claim 19. The combination of Chan and Sakata discloses The image forming apparatus according to claim 14 wherein, when acquisition and updating of the shared data is inhibited and an application use request is received from one of the plurality of application programs to which a start of the updating of the shared data is not yet notified, the shared data control unit notifies the start of the updating of the shared data to said one of the plurality of application programs [**Chan discloses an exclusive lock inhibits acquisition and updating of**

Art Unit: 2185

data (col. 1, lines 56-59; col. 5, lines 61-67) wherein in the background section, Chan discloses an embodiment in which “the requesting node is required to send a message to the remote master node. The lock manager then sends a response message to the requesting node to notify that node about whether a lock may be granted... When none of the nodes in the node group is holding an exclusive lock, and the requesting node is seeking a shared lock, the lock manager can grant the lock to the requesting because there are not conflicts” (col. 2, lines 32-49) “Ownership of an exclusive mode lock 150 grants a process permission to perform any operation on a table, and guarantees that no other process is performing any operation on the table” (col. 1, lines 56-59); thus when exclusive lock is held, a message is sent to requesting node indicating a node is holding an exclusive lock any other request may not be granted access; wherein when an exclusive lock is obtained for write access, wherein the response indicating the lock is exclusively owned comprises write start notification since an exclusive lock must be obtained for write access].

18. As per claim 20. The combination of Chan and Sakata discloses The image forming apparatus according to claim 14 wherein, after the end of the updating of the shared data is notified to the selected application programs, the shared-data control unit inhibits updating of the shared data in response to a read-lock request received from any of the selected application programs to which the the end of the updating of the shared data is notified [**Chan discloses, nodes are notified when exclusive lock is released (col. 6, lines 10-20) wherein when an exclusive lock is obtained for write access, the release of the exclusive lock comprises an end of updating “and node 210S in step 416 then obtains a shared lock when local exclusive lock flag 220S is cleared” (col. 6, lines 24-26) wherein when a process holds a shared lock,**

Art Unit: 2185

no processes may update shared resources since an exclusive lock is required for updating (col. 1, lines 50-59; col. 2, lines 8-21), refer to “data blocks of a storage medium or tables stored on a storage medium, may be concurrently accessed in some ways (e.g. read) by multiple processes, but accessed 1 other ways (e.g. written to) by only one process at a time” (col. 1, lines 1-33; fig. 2 and related text)]. Further note that a plurality of read accesses may be obtained when any of the processes holds a shared lock; however, when any of the processes holds an exclusive lock which is necessary for write access, no other process may have access to the data.

19. As per claim 25. The combination of Chan and Sakata discloses The image forming apparatus according to any of claims 1, 14, and 22 wherein the shared-data control unit is provided to receive at least one of an acquisition start request, an acquisition end request, an updating start request and an updating end request from an external network device [**Chan discloses “the processes on nodes 210-O to 210-N have access to various resources on a network... lock manager resides in a node 210... a node is said to be seeking to obtain a lock when any process on the node is seeking to obtain a lock” (col. 4, lines 59-64) wherein processes perform lock requests to lock manager and release locks which comprise acquisition start and end request and receive acquisition start and end requests from manager indicating a node has acquired an exclusive lock or released an exclusive lock (col. 5, line 35-col. 7, line 30)].**

20. As per claim 26. The combination of Chan and Sakata discloses The image forming apparatus according to any of claims 1, 14, and 24 wherein the shared data comprises destination address data which are used by the plurality of application programs in common [**Chan discloses**

Art Unit: 2185

“data blocks of a storage medium or tables stored on a storage medium, may be concurrently accessed in some ways (e.g. read) by multiple processes, but accessed in other ways (e.g. written to) by one process at a time” (col. 1, lines 28-32) wherein “Ownership of an exclusive mode lock 150 grants a process permission to perform any operation on a table, and guarantees that no other process is performing any operation on the table” (col. 1, lines 56-59) wherein in order to perform memory accesses to a shared memory location, applications or processes must comprise a destination address].

21. As per claim 27. The combination of Chan and Sakata discloses The image forming apparatus according to any of claims 1, 14, and 22 wherein the plurality of application programs include at least one of a scanner application program and a fax application program which use the shared data [**Sakata discloses an image forming apparatus (col. 2, lines 11-14; refer to fig. 27) wherein "a facsimile application software" and a "scanner" both store data to “image memory 195” (col. 11, lines 53-67)].**

22. **Claim 21** is rejected under 35 U.S.C. 103(a) as being unpatentable over Chan et al. (US 6,965,893) in view of Sakata (US 5,528,361) as applied to claim 14, and further in view of Harris (US 6,912,621).

However, the combination of Chan and Sakata does not expressly disclose applications provided not to read out the shared data from the storing device upon

23. As per claim 21. The combination of Chan and Sakata discloses The image forming apparatus according to claim 14 but does not disclose expressly wherein the shared-data control unit is provided to include additional information, indicating that the updating of the shared data

Art Unit: 2185

is not performed, in the updating-end notification which notifies the end of the updating of the shared data to the selected application programs.

Harris discloses a computer system for controlling access to a shared memory wherein the shared-data control unit is provided to include additional information, indicating that the updating of the shared data is not performed, in the updating-end notification which notifies the end of the updating of the shared data to the selected application programs as **[Harris discloses a “all accesses to shared data should be made while the corresponding lock is held... To change data, a write lock must be held” (col. 18, lines 29-33) wherein when a write lock is to be released, “If the programmer is sure that no changes have been made to the structure, the lock may be released with sharedMem-ReleaseNoChange... This call does not copy the data or send it to the partner controller, so it is quicker and should be used when possible” (col. 10, lines 49-56)]**.

Chan, Sakata and Harris are analogous art because they are from the same field of endeavor of accessing a memory device by a plurality of processes or applications.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify combined system and method of Chan and Sakata wherein a plurality of applications access a shared memory and the access is controlled via exclusive and shared locks to further include additional information, indicating that the updating of the shared data is not performed, in the updating-end notification which notifies the end of the updating of the shared data to the selected application programs via a no change response message when releasing a write lock as taught by Harris since Harris discloses doing so is **[provides high speed data sharing (col. 10, lines 49-56)]**.

Art Unit: 2185

Therefore, it would have been obvious to combine Chan with Sakata and Harris for the benefit of creating an image forming apparatus to obtain the invention as specified in claim 21.

CLOSING COMMENTS

Examiner's Note

24. Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant, in preparing the responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

Conclusion

When responding to this Office Action:

12. Applicant is requested to indicate where in the disclosure support is to be found for any new language added to the claims by amendment. 37 C.F.R. § 1.75(d)(1) requires such support in the Specification for any new language added to the claims and 37 C.F.R. § 1.83(a) requires support be found in the Drawings for all claimed features.

25. Applicant must clearly point out the patentable novelty which he or she thinks the claims present, in view of the state of the art disclosed by the references cited or the objections made, and must also explain how the amendments avoid the references or objections. See 37 C.F.R. § 1.111(c).

a. STATUS OF CLAIMS IN THE APPLICATION

26. The following is a summary of the treatment and status of all claims in the application as recommended by **M.P.E.P. 707.07(i)**:

a(1) CLAIMS REJECTED IN THE APPLICATION

27. Per the instant office action, claims 14-21 and 25-27 have received a first action on the merits and are subject of a first action non-final.

a2) CLAIMS NO LONGER UNDER CONSIDERATION

28. Non-elected claims 1-13, 22-24, 28-34 and embodiments of multiple dependent claims 25-27 depending on claims 1 and 22 are withdrawn from further consideration.

b. DIRECTION OF FUTURE CORRESPONDENCES

29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yaima Campos whose telephone number is (571) 272-1232. The examiner can normally be reached on Monday to Friday 8:30 AM to 5:00 PM.

30. If attempts to reach the above noted Examiner by telephone are unsuccessful, the Examiner's supervisor, Mr. Sanjiv Shah, can be reached at the following telephone number: Area Code (571) 272-4098.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more

Art Unit: 2185

information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 9, 2009

/Yaima Campos/
Examiner, Art Unit 2185

/Sanjiv Shah/
Supervisory Patent Examiner, Art Unit 2185